

**REMOVAL ASSESSMENT
QUALITY ASSURANCE SAMPLING PLAN

FOR

HOPE IRON AND METAL ASSESSMENT
812 NORTH MAIN STREET
HOPE, HEMPSTEAD COUNTY, ARKANSAS**

Prepared For

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1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) contractor, has been tasked by the U.S. Environmental Protection Agency Region 6 (EPA Region 6) under Contract Number EP-W-06-042, Technical Direction Document (TDD) No. 5/WESTON-042-16-005 (Appendix E) to perform a Removal Assessment at the former Hope Iron and Metal site located at 812 North Main Street in Hope, Hempstead County, Arkansas. The geographic coordinates of the site are Latitude 33.675978° North and Longitude 93.594903° West. A Site Location Map is provided as Figure 1-1. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database number assigned to the Hope Iron and Metal Site is ARN000607050. The EPA Team has prepared this Removal Assessment Quality Assurance Sampling Plan (QASP) to describe the field investigation activities, sampling, and analytical scope of work to be conducted as part of the assessment.

1.1 PROJECT OBJECTIVES

START-3 is providing technical assistance to EPA Region 6 for the performance of the assessment and to collect the data necessary to support EPA's determination that the site presents a threat to public health or welfare of the United States or the environment in accordance with *40 Code of Federal Regulations (CFR) 300.415*.

The project objective of the Removal Assessment is to determine the nature and extent of site-related contaminants of concern in on-site soils.

The project objective of the Removal Assessment will be achieved by conducting the following activities:

- Collection, review, and evaluation of site history, site operations, and site features.
- Collection and laboratory analysis of samples from on-site soils for site-related contaminants.
- Review and evaluation of soil sample data as compared to EPA Regional Screening Levels (RSLs) and EPA Regional Removal Management Levels (RMLs).

1.2 A COPY OF THE MAY 2016 EPA RSLs AND RMLs IS PROVIDED IN APPENDIX D. PROJECT TEAM

The EPA Team will consist of José L. Ojeda as the Project Team Leader (PTL) and Field Safety Officer (FSO); a Data Manager; and additional Field Team Members to assist with sampling activities. The PTL will be responsible for the technical quality of work performed in the field, for documentation of site operations, for providing overall site health and safety support, and will serve as the START-3 liaison to EPA Region 6. The PTL, in collaboration with Nicolas Brescia, the EPA On-Scene Coordinator (OSC), will determine the location for sample collection in the field, collect samples as necessary, log the activities at each sample location in the field logbook, and verify the sample documentation. The Data Manager will be responsible for entering samples collected into SCRIBE and producing accurate chain-of-custody documentation for the samples during the assessment. The START-3 Field Team Members will, as necessary, oversee and/or conduct sample collection, preparation, and documentation; and document site activities in field logbooks and data sheets. Sample documentation, preparation and shipping is also the responsibility of the START-3 Data Manager. The START-3 FSO will be responsible for providing overall site health and safety support during the removal assessment field activities. The WESTON Scope of Work Leader, Jeff Criner, will provide technical support to the START-3 personnel during project activities.

1.3 QASP FORMAT

This QASP has been organized in a format that is intended to facilitate and effectively meet the objective of the assessment. The QASP is organized in the following sections:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Sampling Approach and Procedures
- Section 4 – Analytical Methods and Data Validation
- Section 5 – Quality Assurance

All figures are provided as separate Portable Document Format (PDF) files. Appendices are attached with the following information:

Appendix A ADEQ Expanded Site Inspection Report

Appendix B Standard Operating Procedures

Appendix C Data Quality Objectives

Appendix D EPA Regional Screening Levels (May 2016) and EPA Regional Removal
Management Levels (May 2016)

Appendix E TDD 5/WESTON-042-16-005

2. SITE BACKGROUND

Information about the site location and description, and potential sources and site concerns are included in the following subsections.

2.1 SITE LOCATION AND DESCRIPTION

The Hope Iron and Metal site (Site) is located at 812 North Main Street in Hope, Hempstead County, Arkansas, within a commercial/residential area. The geographic coordinates of the site are Latitude 33.675978° North and Longitude 93.594903° West. The site encompasses approximately 2.5 acres, and is located in Section 28, Township 12S, Range 24W, Lots 1, 2, 3, 4, 5 of Block 2 of London Subdivision, according to the Hempstead County Central Appraisal District. The site is bordered by North Walnut Street and a Union Pacific railroad to the east, East Greenwood Street to the north, North Main Street to the west, and the property owner's residence to the south-southeast. A former petroleum, oil and lubricant (POL) facility was located on the southeast portion of the property. Two corrugated metal buildings are located on site. Building 1 is located in the northwest section of the site and appears to be abandoned. Building 2 is located in the southwest section of the site and is currently being used as a small automotive repair business. A Site Area Map is provided as Figure 2-1, and a Site Property Map is provided as Figure 2-2.

2.2 POTENTIAL SOURCES OF HAZARDOUS MATERIALS

Information concerning the known or potential hazardous substance source areas at the site and the constituents thought to be associated with each source are presented in the following section. Based on the Arkansas Department of Environmental Quality (ADEQ) Expanded Site Inspection (ESI) report dated 14 September 2015, former site activities that contributed to potential sources include:

- Potential presence of hazardous substance contamination due to typical historic operations associated with metal salvage yards.
 - The site operated as a metal salvage yard from approximately 1982 until 1992.
- Receiving, storing and draining Polychlorinated biphenyl (PCB) containing electrical equipment on-site.

- No records of hazardous waste being generate at the site were located during the ESI.
- Burning rubber and other insulation materials off of copper wiring.
- Potential 1,000-gallon underground storage tank (UST) on-site near Building 2.

2.3 SITE CONCERNS

The site presents concerns in regards to public health and the environment. Based on the site history and current site conditions, the site concerns include the following:

- The ESI analytical results indicated that metal, PCB, and Semivolatile Organic Compounds (SVOC) contaminated sediment, surface soil, and subsurface soils are present at concentrations exceeding residential and industrial USEPA Region 6 RSLs, sediment ecological screening levels, and three times the maximum background concentrations established for the site.
- Contamination was found throughout the site. The most substantial was lead and PCB contamination found in surface and subsurface soil on the north/northeast portion of the site.

The contaminants of concern for the site are, but not limited to, metals, PCBs, and SVOCs with metal salvage yards. See Attachment A, ADEQ Expanded Site Inspection Report

3. SAMPLING APPROACH AND PROCEDURES

The specific field investigation activities to be conducted during the Removal Assessment are presented in the following subsections. Specifically, sampling procedures, locations, quality assurance (QA), and the analytical approach that will be used during the removal assessment are discussed below. Relevant Standard Operating Procedures (SOPs) for field sampling methods are included in Appendix B. START-3 will use EPA Scribe Environmental Sampling Data Management System (SCRIBE) software to manage sample data.

3.1 OVERVIEW OF SAMPLING ACTIVITIES

EPA and START-3 developed sampling strategies intended to collect data necessary to evaluate and meet the objective of the Removal Assessment. Data quality objectives as well as an overview of the health and safety and field activities required to complete these tasks are presented in the following subsections.

The EPA Team will collect up to 100 soil samples from 50 by 50 foot grids established throughout the site. The locations of the proposed sampling grids are illustrated on Figure 3-1. The following subsections provide an overview of the sampling activities for the Removal Assessment.

3.1.1 Data Quality Objectives

The objectives of the Removal Assessment sampling activities described in this QASP are to determine the nature and extent of site-related contaminants of concern in on-site soils. To accomplish this, a data quality objective (DQO) for determining the extent of site-related contaminated soil has been established and is included in Appendix C. The DQO presented was developed using the seven-step process set out in the *EPA Guidance for Quality Assurance Project Plans: EPA QA/G-5*. Soil sample locations were selected systematically to delineate the potential for contaminant hotspots.

Table 3-1 summarizes the Removal Assessment sample descriptions and the rationale for their collection.

3.1.2 Health and Safety Plan Implementation

The removal assessment field activities will be conducted in accordance with the site-specific health and safety plan (HASP). The FSO will be responsible for implementation of the HASP during field investigation activities. The START-3 field team will be required to conduct work according to the guidelines and requirements of the HASP. In accordance with the WESTON general health and safety operating procedures, the field team will also drive the route to the hospital specified in the HASP prior to initiating sampling activities.

3.1.3 Community Relations

Community relations may require additional EPA involvement due to the general nature of the site. Community relations issues will be directed to the EPA OSC. If the EPA OSC is not present, the START-3 PTL, under the guidance of the WESTON Scope of Work Leader, will manage community relations in the field as directed by the EPA OSC. If a community relations plan and an implementation program become necessary, START-3 will establish each if requested by the EPA OSC.

3.2 SAMPLING/MONITORING APPROACH

Sampling will be conducted in general accordance with the EPA *Compendium of Emergency Response Team (ERT) Soil Sampling and Surface Geophysics Procedures* and with EPA ERT and WESTON Standard Operating Procedures (SOPs) (Appendix B). WESTON SOPs include SOP No. 110.01 and 1001.10 (Surface Soil Sampling and Composite Sampling). The specific sampling, decontamination, and sample handling procedures, including disposition of investigation-derived waste (IDW), are described in the following subsections. The following subsections describe the proposed sampling, sample handling procedures and field quality control (QC) samples for the removal assessment activities. The EPA OSC will be notified, and concurrence will be obtained should significant deviations from the planned sampling activities are proposed. Details regarding deviations of the QASP will be documented in the START-3 site logbook.

3.2.1 Soil Sampling

The EPA OSC and START-3 developed a sampling strategy consisting of 50 foot by 50 foot systematic grids established across the entire site (Figure 3-1). The EPA Team will collect approximately 115 soil samples (including quality assurance/quality control samples) from 64 sample grids. At the direction of the EPA OSC, soil samples may not be collected at depths previously sampled during the ADEQ ESI sampling activities (Figure 3-2).

At each designated grid, the EPA Team will utilize a Geoprobe® subsurface coring device to collect surface and subsurface soil samples. Each sample will consist of a 5-point composite sample collected at three depth intervals: 0 to 6 inches below ground surface (bgs), 6 to 18 inches bgs and 18 to 24 inches bgs. At the direction of the EPA OSC, soil samples will also be collected at 24 to 48 inches bgs in areas identified in the ADEQ ESI to have PCB exceedances. Samples will be composited per interval from the five aliquots within each grid. For example, the 0-to 6-inch depth soils from each of the five sample locations will be composited into one sample for analyses. All samples will be collected in the appropriate sample containers and submitted an EPA approved laboratory for analysis.

3.2.2 Sampling and Sample Handling Procedures

Samples will be collected using equipment and procedures appropriate to the matrix, parameters, and sampling objectives. The volume of the sample collected will be sufficient to perform the laboratory analysis requested. Samples will be stored in the proper types of containers and preserved in a manner appropriate to the analysis to be performed.

Clean, decontaminated sampling equipment and sample containers will be maintained in a clean, segregated area. Samples will be collected with clean decontaminated equipment following WESTON SOP 1201.01. Samples collected for laboratory analysis will be placed directly into pre-cleaned, unused glass or plastic containers. Sampling personnel will change gloves between each sample collection/handling. Samples will be assembled and catalogued prior to shipping to the designated laboratory (following WESTON SOP 1101.1 and 1102.01).

3.2.3 Field Quality Control Samples

The EPA Team will collect field duplicate samples and submit matrix spike/matrix spike duplicates and equipment rinsate blank samples as needed during the sampling activities. QA/QC samples will be collected according to the following protocol:

- Blind field duplicate samples will be collected during sample activities for locations selected by the START-3 PTL. The data obtained from these samples will be used to ensure the quality assurance of the sampling procedures and laboratory analytical data by following an evaluation of reproducibility of results. Efforts will be made to collect duplicate samples from an area collocated from the original sample location where there is visual evidence of contamination or where contamination is suspected. One duplicate sample will be collected for every 20 samples of the same matrix.
- MS/MSD samples will be collected during the sample activities for locations selected by START-3 PTL. The data obtained from these samples will be used to ensure the quality assurance of the sampling procedures and laboratory analytical data by following an evaluation of reproducibility of results. Efforts will be made to collect MS/MSD samples from an area collocated from the original sample location where there is visual evidence of contamination or where contamination is suspected. One MS and one MSD samples will be collected for every 20 samples of the same matrix.
- Equipment rinsate blanks will be prepared by pouring laboratory-grade deionized water over non-disposable sampling equipment after it has been decontaminated and collecting the rinse water in sample containers for analyses. These samples will be prepared to demonstrate that the equipment decontamination procedures for the sampling equipment were performed effectively. The equipment rinsate blanks will be prepared each day for each type of non-disposable sampling equipment used.
- Temperature blanks will be prepared in the field and will consist of one 40-milliliter glass sample container with Teflon-lined septum cap. The temperature blank will be packaged along with the field samples in the shipping cooler and will represent the temperature of the incoming cooler upon receipt at the laboratory. Use of these samples within a shipping container enables the laboratory to assess the temperature of the shipment without disturbing any of the field samples.

3.3 SAMPLE MANAGEMENT

Specific nomenclature that will be used by the EPA Team will provide a consistent means of facilitating the sampling and overall data management for the project (WESTON SOP 0110.05). The START-3 Scope of Work Leader must approve any deviations from the sample nomenclature proposed below.

As stated in WESTON SOP 0110.05, sample nomenclature will follow a general format regardless of the type or location of the sample collected. The general nomenclature consists of the following components:

- Property/Site Identification (ID) or Area of Concern
- Grid ID
- Sample Collection Depth
- Collection type (Soil, Field QC, etc.)
- QA/QC type (normal, duplicate, etc.).

The following presents the sample nomenclature for analytical samples that will generate unique sample names compatible with most data management systems. The sample nomenclature is based upon specific requirements for reporting these results.

SAMPLE NOMENCLATURE - SOIL

Property ID - Grid ID - Depth - Collection Type + QC Type

Where:

Property ID: An identifier used to designate the particular property or Area of Concern (AOC) where the sample was collected.

Grid ID: A two- or three-character alpha numeric code used to designate the particular grid or station within the AOC where the sample was collected.

Depth: A two-digit code used to designate what depth of sample was collected:

06	0 to 6 inches
12	6 to 18 inches
24	18 to 24 inches
48	24 to 48 inches

Collection Type: A one-digit code used to designate what type of sample was collected:

1	Surface Water
2	Groundwater
3	Leachate
4	Field QC/Water Sample
5	Soil

6	Oil
7	Waste
8	Other
9	Drinking Water
0	Sediment

QC Type: A one-digit code used to designate the QC type of the sample:

1	Normal
2	Duplicate

6	Confirmation
7	Confirmation Duplicate

3	Rinsate Blank
4	Trip Blank
5	Field Blank

Examples:

- **HIM-D4-06-51:** Represents a normal soil sample collected from Grid D4 at a depth of 0- to 6-inches below ground surface (bgs) as identified on Figure 3-1 Proposed Sample Location Map.
- **HIM-G9-12-52:** Represents the duplicate soil sample collected from Grid G9 at a depth of 6- to 12-inches bgs as identified on Figure 3-1 Proposed Sample Location Map.

Sample data management will be completed utilizing SCRIBE including Chain-of-Custody (COC) and sample documentation needs.

3.4 DECONTAMINATION

The nondisposable sampling equipment (hand trowels, stainless steel bowls, Geoprobe coring shoe etc.) used during the sample collection process will be thoroughly pre-cleaned before initial use, between use, and at the end of the field investigation. Equipment decontamination will be completed in the following steps:

- Water spray or brush, if needed, to remove soil/sediment from the equipment.
- Nonphosphate detergent and potable water wash to clean the equipment.
- Final potable water rinse.
- Equipment air-dried.

Personnel decontamination procedures will be described in the site-specific HASP that will be prepared by START prior to implementation of activities at the site. All decontamination activities will be conducted at a temporary decontamination pad that will be constructed/designated in an area to be determined by the PTL.

Excess soil and fluids generated as a result of equipment decontamination will be placed in a drum and staged in an area to be determined by the PTL. The drum will be labelled on the side with the name of the site, the contents, sampling location, and date.

3.5 SAMPLE PRESERVATION, CONTAINERS, AND HOLD TIMES

Sample preservation, containers, and holding times utilized during this Removal Assessment will be consistent with analytical methods and laboratory volume requirements as provided in Table 3-2. Once collected, samples will be stored in coolers and kept at approximately 4°C while at the site and until they are submitted for analysis. Chain-of-custody forms will be completed for each sample shipment and sent with the samples to the designated laboratory. Samples that have been analyzed will be disposed of by the designated laboratory in accordance with the laboratory SOPs.

Table 3-1
Sample Description and Rationale
Hope Iron and Metal
Hope, Hempstead County, Arkansas

Sample Location	Sample Collection Method	Sample Depth	No. of Samples ¹	Rationale	EPA Analytical Method ²
Soil	Disposable Scoop Hand Trowel Geoprobe	0 to 6-inches bgs, 6 to 18-inches bgs, 18 to 24-inches bgs, and 24 to 48-inches	115	To document the presence of site-specific contaminants of concern in surface and subsurface soil	PCBs- EPA SW-846 Method 8082A Metals – EPA SW-846 Method 6020 Mercury – EPA SW-846 Method 7471 SVOCs – EPA SW-846 Method 8270D

Notes:

Soil Samples – 100 Normal and 5 QA/QC samples including field duplicates and MS/MSD samples. One Equipment Rinsate sample will also be submitted for each day of sampling utilizing non-dedicated sampling equipment.

Table 3-2
Requirements for Containers, Preservation Techniques,
Sample Volumes, and Holding Times
Hope Iron and Metal
Hope, Hempstead County, Arkansas

Name	Analytical Methods	Matrix	Container	Preservation	Minimum Volume or Weight	Maximum Holding Time
TAL Metals and Mercury	SW846 6020 and SW846 7470/7471A	Water / Soil	Polyethylene (water), Glass (soil)	HNO ₃ to pH<2 (water), 4°C	500 mL (water), 8oz (soil)	28 days for mercury 180 days all other metals
PCBs	SW846 8082A	Water / Soil	Amber Glass, (Teflon- lined for water), Glass (soil)	4°C	2 x 1 liter (water), 8 oz (soil)	7 days extract (water), 14 days (soil)/ 40 days analysis
SVOCs	SW846 8270D	Water / Soil	Amber Glass (Teflon-lined for water), Glass (soil)	4°C	1 liter (water), 8 oz (soil)	7 days extract (water), 14 days (soil)/ 40 days analysis

4. ANALYTICAL METHODS AND DATA VALIDATION

Analytical samples collected by the EPA Team will be submitted to Empirical Laboratories, LLC for analytical analysis. Requested sample analysis will be indicated on the COC and will include one or more of the following methods:

- Target Analyte List (TAL) Metals plus Mercury by EPA SW-846 Method 6020/7471
- Polychlorinated biphenyls (PCBs) by EPA SW-846 Method 8082A
- Semivolatile Organic Compounds by EPA SW-846 Method 8270D

Deliverables will include preliminary data via email in pdf format. The final data deliverable will include a full Contract Laboratory Program (CLP) like data package (Level IV data package with QC and raw data) in PDF format and a final Electronic Data Deliverable (EDD) in excel format. Initial data deliverables (Preliminary results) will be based on a 3 business day Turn-around Time (TAT), unless otherwise directed by the EPA OSC. The TAT criteria will be initiated when the sample group is received by the laboratory and continues until the data deliverable is submitted to the START-3 contractor. The final Level IV data deliverable will be submitted by the laboratory based on a 10 business day TAT.

START-3 will validate the analytical data generated by the laboratory and provide an evaluation of QA/QC samples for reporting purposes. Data validation will be conducted in accordance with the EPA CLP *National Functional Guidelines for Organic Superfund Data Review – August 2014* (EPA-S40-R-014-002) and *National Functional Guidelines for Inorganic Superfund Data Review – August 2014* (EPA-S40-R-013-001). A summary of the data validation findings will be presented in Data Validation Summary Reports as part of the final report. The following will be evaluated to verify that the analytical data is within acceptable QA/QC tolerances:

- The completeness of the laboratory reports, verifying that required components of the report are present and that the samples indicated on the accompanying chain-of-custody are addressed in the report.
- The calibration and tuning records for the laboratory instruments used for the sample analyses.

- The results of internal standards analyses.
- The results of laboratory blank analyses.
- The results of laboratory control sample (LCS) analyses.
- The results of matrix spike/matrix spike duplicate (MS/MSD) analyses.
- The results of surrogate recovery analyses.
- Compound identification and quantification accuracy.
- Laboratory precision, by reviewing the results for blind field duplicates.
- Variances from the QA/QC objectives will be addressed as part of the Data Validation Summary Reports.

The laboratory and shipping information are as follows:

Empirical Laboratories, LLC
621 Mainstream Drive, Suite 270
Nashville, TN 37228

5. QUALITY ASSURANCE

Quality Assurance (QA) will be conducted in accordance with the WESTON Corporate Quality Management Manual; the WESTON START-3 Quality Management Plan; and EPA Guidance for Performing Site Inspections under CERCLA. Following receipt of the TDD from EPA, a Quality Control (QC) officer will be assigned and will monitor work conducted throughout the entire project including reviewing interim report deliverables and field audits. The START-3 PTL will be responsible for QA/QC of the field investigation activities. The designated laboratory utilized during the investigation will be responsible for QA/QC related to the analytical work. START-3 will also collect samples to verify that laboratory QA/QC is consistent with the required standards and to validate the laboratory data received.

5.1 SAMPLE CHAIN-OF-CUSTODY PROCEDURES

START-3 will utilize SCRIBE for the sample documentation and chain-of-custody COC preparation needs. Because of the evidentiary nature of sample collection, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. After sample collection and identification, the samples will be maintained under the COC procedures. Personnel required to package and ship coolers containing potentially hazardous material will be trained accordingly.

The COC procedures are documented in WESTON SOP 1101.01, and will be made available to personnel involved with the sampling. A typical COC record included in WESTON SOP 1101.01 will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each of the sample labels and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped samples at all times, and the member of the sampling team who originally relinquished the samples will retain another copy. START-3 personnel will complete a COC form for all samples sent to a START-3-designated off-site laboratory.

Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- The COC record will accompany samples. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. This custody record documents transfer of sample custody from the sampler to another person or to the laboratory.
- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and stuck to the seal to ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.
- If sent by common carrier, a bill of lading or airbill will be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer.

WESTON SOPs 1101.01 and 1102.01, provided in Appendix B, describe these procedures in more detail.

5.2 PROJECT DOCUMENTATION

Documents will be completed legibly and in ink and by entry into field logbooks, Response Manager, or SCRIBE. Response Manager is the Enterprise Data Collection System designed to provide near real-time access to non-analytical data normally collected in logbooks. Response Manager provides a standard data collection interface for modules of data normally collected by START-3 field personnel while on-site. These modules fall into two basic categories for response and removal. The modules include Emergency Response, Reconnaissance, Facility Assessment, Shipping, Containers, Materials, Calls, HHW, and General/Site Specific data. The system provides users with a standard template for laptop/desktop/tablet PCs that will synchronize to the secure web interface using merge replication technology to provide access to field collected data via on the RRC-EDMS EPA Web Hub. Response Manager also includes a PDA application that provides some of the standard data entry templates from Response Manager to users for field data entry. Response Manager also includes an integrated GPS unit with the secure PDA application, and the coordinates collected in Response Manager are

automatically mapped on the RRC-EDMS interactive mapping site. GIS personnel can then access this data to provide comprehensive site maps for decision-making support.

Response Manager also includes an Analytical Module that is designed to give SCRIBE users the ability to synchronize the SCRIBE field data to the RRC-EDMS Web Hub. This allows analytical data managers and data validators access to data to perform reviews from anywhere with an Internet connection. The Analytical Module is designed to take the analytical data entered into EPA SCRIBE software and make it available for multiple users to access on one site. START-3 personnel will utilize SCRIBE for all data entry on-site and will upload to the Response Manager Analytical Module.

Field Documentation

The following field documentation will be maintained as described below.

Field Logbook

The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. All entries will be signed by the individuals making them. Entries should include, at a minimum, the following:

- Site name and project number.
- Names of personnel on-site.
- Dates and times of all entries.
- Description of all site activities, including site entry and exit times.
- Noteworthy events and discussions.
- Weather conditions.
- Site observations.
- Identification and description of samples and locations.
- Subcontractor information and names of on-site personnel.
- Dates and times of sample collections and chain-of-custody information.
- Records of photographs.
- Site sketches.
- Calibration results.

Sample Labels

Sample labels will be securely affixed to the sample container. The labels will clearly identify the particular sample and include the following information:

- Site name and project number.
- Date and time the sample was collected.
- Sample preservation method.
- Analysis requested.
- Sampling location.

Chain-of-Custody Record

A chain-of-custody will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed for and a copy of the record will be kept by each individual who has signed it.

Custody Seal

Custody seals demonstrate that a sample container has not been tampered with or opened. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

Photographic Documentation

START-3 will take photographs to document site conditions and activities as site work progresses. Initial conditions should be well documented by photographing features that define the site-related contamination or special working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special situations and conditions that may arise during site activities. Site final conditions should also be documented as a record of how the site appears at completion of the work.

Photographs should be taken with either a film camera or digital camera capable of recording the date on the image. Each photograph will be recorded in the logbook and within Response Manager with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken). Where appropriate, the photograph location, direction, and subject will also be shown on a site sketch and recorded within Response Manager.

Response Manager

START-3 will use the Response Manager module located on the EPA Web Hub, <https://solutions.westonproject.net/epawebhub/>, to compile and organize the data collected from

project activities. The information to be included encompasses some or all of the following depending on the specific project needs:

- General Module – site-specific data including location and type of site. It also includes an area for key site locations including geo-spatial data associated with the key site locations.
- Emergency Response Module – includes the following sub-modules: Basic Info, HAZMAT, Release, Time Line Log, Incident Zones, Photos, Sensitive Receptors, Evacuations, Source, Cause, and Weather.
- Reconnaissance Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for targeted reconnaissance efforts. Typically the data in this module is associated with ESF-10 deployments and the clean-up of orphaned containers and hazardous debris, but the module can be utilized for any or all reconnaissance activities.
- Facility Assessment Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for assessments of structures. Typically utilized for EPA regulated program facilities during an ESF-10 deployment of resources. This module can be utilized to track the assessment of any facilities including multiple assessments of the fixed facilities.
- Shipping Module – provides standard templates for creating a cradle-to-grave record of all waste shipments from the site until they are recycled or destroyed. This includes the ability to capture manifests and manifest line items and upload photos/original documents to support the records.
- Container Module – provides standard templates for cataloguing containers including HAZCAT and Layer information in each container. The module also allows for tracking which containers are bulked.
- Properties Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for collection of property data including access agreements and assessments of the property and current status of property regarding the site removal action.
- Materials Module – provides standard templates for tracking materials that are brought on-site or that are removed from the site.
- Daily Reports – provides standard templates for tracking daily site activities, daily site personnel, and daily site notes for reporting back to the EPA OSC in a POLREP or SITREP.
- HHW Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for tracking the amount of HHW collected at individual collection stations by HHW type.

- Data Files – data files can be uploaded in the photo module section and be associated with individual records or with the site in general. The meta-data associated with that data file can be filled in using the photo log fields.

The data stored in the Response Manager database can be viewed and edited by any individual with access rights to those functions. At any time deemed necessary, POLREP and/or SITREPs can be generated by exporting the data out of Response Manager into Microsoft Excel/Word. The database is stored on a secure server and backed up regularly.

5.3 REPORT PREPARATION

At the completion of the project, START-3 will review and validate laboratory data and prepare a draft report of field activities and analytical results for EPA OSC review. Draft deliverable documents will be uploaded to the EPA TeamLink website for EPA OSC review and comment.